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LECTURES.

CLINICAL LECTURE ON CANCER OF THE FACE, INCLUDING "RODENT ULCER."

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GENTLEMEN, — The disease we are to study is found in so many forms, I might almost say disguises, and runs so varied a course under changing conditions, that opinions differ widely as to its nature, and some of its forms not unfrequently pass unrecognized. It may be well to say at once that cancer of the lip is not included in this class, belonging to a different variety of cancers, and to diseases of the "mouth" rather than of the "face." We find these growths chiefly above a line running from ear to ear beneath the nose, occupying the upper part of the cheek near the eyelids, or the sides of the nose, or the temples. The following case is presented to illustrate one of their many phases. The patient who was operated upon two days ago, and whose wounds are healing rapidly, is, as you see, an old man. He is seventy-seven years of age. A small pimple was first noticed about eighteen months ago on the right temple, and he presented himself for its removal early in the autumn; at that time it had a papillary or nodulated look, and was somewhat discolored by dirty crusts of epidermis. It was superficial, not going beneath the skin, and did not exceed one half an inch in length. A growth on the cheek, just beneath the eye, too insignificant to meddle with at that time, has since increased in size, and, though still small, was removed the day before yesterday at the same time with a warty-like mass on the prepuce. On close examination you will be able to see that the skin has a look like that of many men of his age. There is a peculiar wax-like transparency of the temples and upper part of the cheeks, and just beneath the surface we can readily make out innumerable small yellowish bodies, at points so close together that they occupy a large part of the substance of the skin, and it is not difficult to recognize them as the sebaceous glands. As if to compensate for this extra softness of the skin, we find at certain points a thickening of the layers of the epidermis, forming little flat crusts, either of silvery whiteness, or,

when mixed with grease and dirt, of a brownish hue. These are not conspicuous blemishes, and might readily escape the notice of a casual observer. Indeed, the general effect of this condition is to produce an appearance with which every one is tolerably familiar in the complexion of many persons who have passed middle age, particularly in those who have a "weather-beaten" look. If we glance at the backs of the hands we shall find a similar condition of the epidermis, and in fact on the left hand we see a firmly adherent discolored crust, about a quarter of an inch in diameter, directly in the middle of the dorsal surface. His general health is excellent, and there has been no return of the disease in the cicatrix occupying the seat of the growth first removed. I have examined microscopically both specimens, but as the one last excised is the smaller of the two, and in an earlier stage of development, I shall describe that first. Having hardened it in "Muller's fluid," I made a number of vertical sections, so cut as to include a portion of the adjacent sound skin. On the edges of the section we see the follicles of one or two lanugo hairs and the accompanying sebaceous glands, which appear decidedly out of proportion in their great size to the other structures. The epithelium and papillæ are normal. As we approach the diseased part we find the epidermis elevated by clumps of epithelial cells, which project downwards into what appears to be a distended hair follicle, at the bottom of which is a sebaceous gland, whose opening is choked with the same material, and whose contents are indistinct and opaque. The walls of the follicle appear to be thickened. The further development of the disease is better studied in the other specimen. Here we find masses of epithelial cells occupying the upper layer of the skin, and corresponding in situation and shape to the sebaceous glands seen on either side, which show changes indicating that they are soon to be involved. A more advanced condition still is to be seen in a specimen which I removed from the brow of an old man last spring. The growth was half an inch thick, and had penetrated nearly to the subcutaneous tissues. It was somewhat elevated above the level of the skin, and had an ulcerated surface, and a base of about the diameter of half a dollar. The condition of the complexion was characteristic, and there were two small growths on the nose excised at the same time. These show the various stages of the same disease from the formation of little lobulated clumps of epithelial cells just beneath the surface to the development of tortuous masses of cells closely packed together, separated only by a delicate and scanty stroma, and involving the entire thickness of the skin, obliterating all other structures. The character of the individual cells is worthy of notice; they belong chiefly to a smaller type of epithelium than the fantastic forms seen in cancer of the lip. Occasionally we find the concentric arrangement, the epidermic balls seen in the latter disease, but this is rare.

I have thus sketched for you a type of cancer which is perhaps the most common variety seen in this region. Both the outward form and the microscopic appearance of these cancers may vary considerably. There may be more growth above the surface, forming a warty or pediculated tumor seated on a little patch of the same disease as a base. The microscopic structure is about the same as in the case just described. Although there is much disturbance of nutrition of the skin, the development of cancer is usually confined to one spot; yet it may be, as we have seen, multiple. Sometimes the disease appears to be just beneath the surface, which is unaffected, but elevated here and there into little humps. Here the clusters of cells are "lobulated" in form; again we have a wart-like form of growth. All these growths, if left to themselves, sooner or later break down in the centre, where a scab then covers an excavation of greater or less extent; but in certain varieties the retrograde changes make themselves manifest from the beginning, and keep pace so evenly with the new growth that the disease from the outset assumes the form of an ulcer.

When observed in its earliest stages of development and in its most typical form, the ulcer is in shape and size similar to a horn waistcoat button, having a flat, depressed centre and a narrow, evenly formed rim. In appearance it is not unlike a vaccine vesicle at a certain stage. There is the central scab and the narrow, pearly border. This resemblance is more striking if we look at the growth through a large hand lens, an instrument which I find useful in examining all doubtful growths about the face. When seen at this stage it is about three eighths of an inch in diameter; the centre frequently appears to have healed over; the little button sits loosely in the surrounding skin, which is perfectly normal in look up to the very edge of the growth. As the disease advances, which it does very slowly, its ulcerating character becomes more apparent. It may take years to double in size. Sometimes one portion of the rim will suddenly begin to grow out of all proportion to the other parts, and we have the ulcer replaced or masked as it were by a tumor. Usually, however, it continues to spread slowly, but is still as superficial as ever; and if the patient live long enough it may cover large surfaces, involving the nose, the eyelids, or the eye itself. Its growth is somewhat hastened by the use of salves and caustics, and if tampered with too much it may assume a very malignant type, penetrating even the bones of the skull. It is to these formidable conditions that the names *lupus exedens* and *noli me tangere* have been applied. In the earlier stages it is best known under the name of rodent ulcer. From its tendency to ulcerate and the vigorous applications of caustics, portions of the cancer tissue are sometimes obliterated, and the base of the ulcer may then be composed almost exclusively of cicatricial tissue, of which there may be occasionally a very large amount.

We must therefore hunt for the cells in the edge of the ulcer, where they will be found only after careful preparation and search. Owing to this fact, the true character of the disease frequently has been overlooked, and even to this day there are many surgeons who do not recognize it as a form of cancer. Formerly this was the universal opinion. I have seen such growths pronounced by an expert microscopist inflammatory or sarcomatous ulcers, when I have been able after patient search to demonstrate satisfactorily the cancerous structure. The most common arrangement of the cells is, in my experience, that known as "tubular."[1] Not that the cancer cells form hollow tubes, but they lie in solid masses in a tube-like system of canals, which anastomose more or less freely with one another. The epithelium is very small and delicate, and reminds one strongly of that seen in the rete mucosum, near the borders of the papillæ, or in the sheath of the hair follicles, to which it is stained in a similar manner by carmine; but occasionally, as I have shown,[2] we may have at certain points a larger epithelium, around which there is a concentric arrangement of cells, as in the more characteristic forms of cancer. This form is not constant; occasionally we find alveoli of oblong, circular, or tortuous shape filled with these cells, and in the centre sometimes an epidermic ball. So far as the development of this variety is concerned, I may say that I have found the cancer cell masses at points to be continuous with the interpapillary epithelium, as if there had been an abnormal ingrowth of the epithelial covering into the parts below, simulating the changes observed in fœtal life when the papillæ of the skin are formed; but one may examine a good many sections before finding any continuity of the disease with the normal epithelium. I have never been able to discover any connection with the sebaceous or sudoriparous glands. In the further *progress* of the disease we may find, in any of the varieties we are now considering, that the method of development may vary from that described. I have shown elsewhere[3] that the wandering cells may play a prominent part. The precise limits of this much discussed and investigated question, the origin of the cancer cell, remains still, in my opinion, unsettled. The weight of authority is now undeniably in favor of its direct origin from normal epithelial structures. I have, however, had satisfactory proof that in some instances this is not the case, and, although epithelium may exert an *action de présence*, as the French

[1] Dr. Thin, of London, and Professor Tiersch, of Germany, believe this variety originates from the sudoriparous glands, the former considering it an adenoma.

[2] Anatomy and Development of Rodent Ulcer, Plate 2.

[3] "It seems justifiable, therefore, to conclude, from the data afforded by these observations, that, in some instances at least, the cancer cells are in no way connected during their development with previously existing epithelial structures, and that we are to seek for their origin rather among the young cells of new formation, which are present in large numbers, and with which the cancer cells appear to come in intimate relation." (Anatomy and Development of Rodent Ulcer, page 57.)

term it, that the connective tissue cells may be the parents of the cancer cells. But it is not of so much practical importance to determine the *origin* as the *nature* of these various forms of growth, and what I wish to impress upon you is that they are, one and all, varieties of cancer. They correspond to that class described by Tiersch in his admirable monograph as flat or superficial cancers, in distinction from the infiltrating (*tiefgreifend*) form, of which cancer of the lip is the type.

The ulcerating form is most frequently seen about the nose or eyelids, but I have lately observed one typical case on the neck below and behind the ear. The patient was a man seventy years of age, and the ulcer, the size of a quarter of a dollar, of two years' standing. There was a great deal of cicatricial tissue at its base which was slightly adhered to the muscle, and the "crow's-feet" folds of skin showed that there had been more loss of substance than was apparent. He had used no caustics. Under the microscope it required a great deal of patient search to find a spot sufficiently typical of cancer to place its true nature beyond a doubt. This is what Billroth would probably call *scirrhus cutis*. These cancers of the face are chiefly found in old people, although I have seen them in comparatively young individuals. They usually begin between the fiftieth and seventieth year.

There are clinical as well as anatomical data which give evidence of the nature of the disease. It is true that we do not find any affection of the adjacent glands, but the disease may spread rapidly, and become very destructive. Under these circumstances we find a corresponding change in its microscopical appearances.[1] The growth is essentially an infiltrating one, destroying rather than pushing aside the healthy tissues. Occasionally it returns after extirpation, but this is usually due to an instinctive unwillingness on the part of the surgeon to destroy a larger surface of the face than is absolutely necessary, and a minute fragment of diseased tissue may thus be left behind. There are, however, instances where a considerable interval of time elapses between the removal of the cancer and its subsequent return.

If the growth is excised it should be wiped carefully, and examined with a hand lens, if small, that we may be sure that the knife has not cut through diseased tissue. If you are sure of your bearings, determined carefully beforehand with a lens, it is surprising how close to the disease you can steer with the knife without fear of cutting into it. If the cancer is of the size which usually drives people to seek relief, there is no danger that the wound may cause ectropion if near the lid, provided we bring the edges together so as to form a linear cicatrix on a line radiating from the centre of the pupil. It is very common, after excision, that patients suppose the disease to have returned in the

[1] Case of *Noli me Tangere*, the JOURNAL, vol. xcv., page 508.

cicatrix, the nodulated character of which on so sensitive and conspicuous a surface is deceptive. On one occasion I removed such a scar, and found the second cicatrix as suspicious in appearance as the first, a condition which shortly after disappeared. Since then I have been obliged to calm more than one patient's fears, and always with the same result. Those who are afraid to use the knife sometimes scrape out the disease with a sharp spoon. The loss of substance is supposed thus to be reduced to a *minimum*. The use of caustics is nowhere so popular as on this region of the body, and they are to be advised in the very earliest stages of the disease, provided we can burn it out in a couple of "sittings." Nothing can be worse than frequent applications of nitric acid, on a stick or glass rod, to the surface of the growth. When there appears to be little more than an abrasion of the skin an ointment of chloride of zinc in the strength of two grains to the ounce may prove effectual. The zinc may be applied rubbed up with equal parts of fresh plaster of Paris, as recommended by Bryant, as it destroys and dries them. The most efficient substitute for the knife is a pointed stick of nitrate of silver, with which the disease should be thoroughly bored. By pinching up the fold of skin surrounding the mass with one hand, the parts to be burned are made more accessible, and the pain is diminished.

Is there such a thing as prophylactic treatment? A great deal can undoubtedly be accomplished by proper attention to the hygiene of the skin. In old people, as we have seen, there is the tendency to derangement of the epithelial structures which exists also in childhood, as may be shown on almost any boy's hands. The formation of crusts or scales should be regarded with suspicion, and any tendency to a disturbance of function of the sebaceous glands should be corrected. Crusts may be removed, according to Bush,[1] by the application of soda on cloths (from one to two and five tenths per cent.), and subsequently washings with a weaker solution. It would seem almost needless to say that a judicious use of soap should be a daily habit. The "pores" should be kept well "open." Esmarch recommends the use of Fowler's solution, one drop three times a day, gradually increasing, till intolerance of the remedy follows, to prevent a return. I have never tried it.

You will observe that in the description of these affections I have not used the term epithelioma. This name was first given to cancers of the face, when the epithelial character of cancer in general was not recognized. They were then thought to be quite a different disease, the epithelial structure being a striking feature. The term should now be discarded altogether, or substituted for that of cancer, in whatever part of the body it may occur.

[1] Recent Progress in Dermatology, Dr. J. C. White, the JOURNAL, vol. xcix., page 767.

TREATMENT OF INGROWN TOE NAIL.

BY GEORGE W. GAY, M. D.,
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In a late number of the Philadelphia *Medical Times* may be found an elaborate paper on the above subject, in which the writer, Dr. Hunter, gives a careful description of what he considers the best method of treating ingrown toe nail. It is a modification of Gosselin's operation, and consists in scraping a longitudinal groove in the nail, brushing the granulations with collodion, introducing small pledgets of cotton under the edge of the nail with a probe made for the purpose, and wrapping the toe in adhesive plaster in such a manner as to draw the diseased tissues away from the nail. Bad cases require four or six weeks' treatment, and even then the disease is likely to return unless the cause has been removed.

Neither in that paper, nor in the discussion by prominent surgeons which followed its reading before the Philadelphia County Medical Society, was any allusion made to an operation for the radical cure of this affection, which in this city and vicinity has in a great measure supplanted all others during the past half a dozen years. We refer to Dr. Cotting's operation,[1] which may be performed as follows: The patient having been etherized, all the overlying tissues, with a portion of the side of the diseased toe, are sliced off freely (Figure 1, *a c*), leaving the edge of the nail clearly exposed and uncovered. The incision should commence well back, as is shown at *d e*, Figure 2, and should expose all of the border of the nail as far as the matrix. There is more danger of cutting off too little than too much. The nail itself need not be interfered with, as nothing will be gained by scraping or removing any portion of it.

FIG. 1.

The comparative size and depth of the portion removed, with its outlines, are indicated in Figure 1, *a c*, and in Figure 2, *d e f*. The wound may be treated with simple dressings, and in the majority of cases is well in two or three weeks. Occasionally, the patient is not laid up more than a day or two after the operation, but continues his occupation during the whole period of convalescence. The same kind of a boot may be worn after recovery as when the affection began, without fear of a return of the disease.

FIG. 2.

"Thus," to use Dr. Cotting's words, "as may be seen, the operation is a very simple one; but it differs from all others hitherto described in itself, and in the principle on which it is founded, — that of cicatricial contraction."[2]

[1] Vide JOURNAL, January 2, 1873.

[2] Loc. cit., page 2.

As a fair illustration of the good results of the operation we give the following case, in the words of the patient, premising, however, that at the time of the operation he was completely disabled, laid up at home, and unable to walk on account of the excessive tenderness of the parts. The toes were very much enlarged and club-shaped. The disease completely covered the edges of the nails at their sides and ends, from under which pus was constantly oozing. As in all bad cases, it was simply impossible to pass lint or even a probe under any part of either of the nails. Both sides of the great toes were thus affected, and both were operated on at the same time. The portions removed were quite an inch in length, three quarters in width, and half an inch in thickness. The tendency to bleed from the cut surfaces was considerable, owing to the inflamed state of the parts, but this was readily controlled by a compress of lint and a narrow roller bandage, the whole being covered with oiled silk.

The patient in a recent letter writes as follows: "I was troubled with ingrowing toe nails three years previous to the operation, and had tried all kinds of methods of cure, but without success. At first lint under the nails, then caustic; after that all kinds of salve were tried. These failing, large pieces of the nails were removed repeatedly, with the after-application, at times, of something to burn the diseased flesh. This last would temporarily ease me; but as soon as the nails commenced to grow again they would become more painful than before. Dr. Cotting's operation was performed in March, 1873, and since that time I have felt no return of my old trouble. My toes healed in about three weeks, and are now perfectly natural in appearance."

The distinguishing feature of this operation is that as the wound heals the cicatrix contracts and draws the tissues away from the nail, leaving its edge free (as at *b*, Figure 1), so that it is hardly possible for it to become infleshed, or buried in the soft parts, in the future.

This operation has been performed many times at the Boston City Hospital; in fact, it is about the only one for this affection that has been done there for several years, and so far we have never seen a failure, nor a case in which the cure was not complete, permanent, and satisfactory.

THE USE OF THE FREEZING MICROTOME.

BY MORRIS LONGSTRETH, M. D.,

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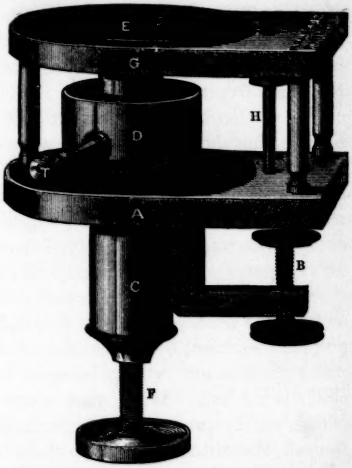
THE subject of freezing microtomes is not a new one, but the instrument or apparatus which I am now using presents some advantages which I have found lacking in the previous inventions, so that a description of it may prove interesting. Nothing needs to be said of the great

utility in this method of preparing sections of tissues for microscopical examination since the appearance of the numerous journal articles on the subject by Rutherford, Bevan Lewis, Hughes, and others during the last few years. I am, however, making a further use of it in cutting sections of already hardened tissues, merely freezing them fast to the plate of the instrument, thus saving the labor of embedding them in paraffine or wax, and the manipulation necessary to freeing the sections from the embedding material before mounting them.

The instrument has four essential parts: first, an ordinary microtome, such as can be firmly fastened to a table; second, a chamber into which the spray is injected and condensed, and on the upper surface of which the tissue is placed to be frozen; third, a section-plate, arranged above the condensing chamber; and, fourth, a hand-ball atomizer with metal tubes (Codman and Shurtleff's).



A. The section-plate of the microtome. B. The clamp for fastening the instrument to a table. C. Embedding chamber. D. Freezing and condensing chamber, screwed fast to the plug in the embedding chamber E. The top of the tube or cylinder of the condensing chamber on which the tissue is placed to be frozen. The condensing chamber is raised and lowered by the micrometer screw, F. G. The section-plate for the freezing microtome, resting on three legs, and fastened firmly to the microtome by the binding screw, H. This section-plate has a circular opening, through which the tube of the freezing chamber moves. T. Escape tube to draw off the condensed rhigolene or ether. The opening in the tube or cylinder of the condensing chamber into which the nozzle of the atomizer is introduced is not shown in the figure, being concealed by the section-plate, G.

The wood-cut shows the ordinary microtome with screw clamp for fastening it to a table; above it is the section-plate resting on three legs and fastened firmly to the microtome by a binding screw. The top of the section-plate is provided with a glass plate having a round hole, through which the tube of the condensing chamber passes when advanced by the micrometer screw. The tube of the condensing chamber is provided with a small aperture made in the side of it (not shown in the wood-cut), and just below the surface of the brass cap which closes the upper end of the tube. The nozzle of the atomizer is introduced into the aperture of the tube, and the spray produced by using the hand-ball. Ether may be used, but I have confined myself to rhigolene entirely, the applicability of which to freezing by

means of the spray apparatus being first described in the JOURNAL for 1866.

The tissue which is to be cut is placed on the brass plate closing the end of the tube of the condensing chamber. I have found an advantage in using a drop or two of gum water, or, better still, the fluid recommended by Rutherford as an embedding substance in his freezing microtome. It consists of gum arabic five ounces, water nine ounces, and spirits of camphor two fluid ounces, the camphor making the mixture when frozen less brittle, and keeping it about the consistence of cheese. The advantage of using the gum solution is that the tissue is made to adhere better to the smooth brass, and is not so liable to be broken off from it when making the section should the tissue become too much frozen.

The section knife can be kept cold by placing it on a block of ice or by directing the spray from the atomizer upon it for a moment or two. It is necessary that the blade should be cold when making sections in summer or in a very warm room, because the sections melt very rapidly and become rolled into a mass difficult to unfold. During the winter, even in the warmed laboratory, I have not found it necessary to use ice for this purpose, and only rarely do I cool the blade with the spray.

As the sections are cut I transfer them from the blade of the knife, or from the brass plate where they fall, to small cups containing an appropriate solution, by means of a needle mounted in a holder. Usually the sections as cut roll up in small rolls; the thinner the section the closer is the roll. With some tissues the rolls are with difficulty unfolded, but by passing the needle through the centre or hollow axis of the roll, then transferring it to the solution in the cup by gentle manipulation, the thin section uncoils and floats out smoothly. Frequently air bubbles become entangled in the roll when dropped into the solution, and cause the section to float; as soon, however, as the uncoiling is effected the tissue sinks. Many tissues, however, and especially those which have been previously slightly hardened by reagents, unfold themselves as soon as they are placed in the cup, and require no further manipulation.

The sections obtained by this means can be made of the greatest thinness and perfectly even; their areas are limited only by the size of the brass plate closing the tube of the condensing chamber. The instruments as now made by Mr. William H. Walmsley, the manager for R. and J. Beck, in Philadelphia, have brass plates either one inch or one and a half inches in diameter.[1]

[1] Mr. Walmsley has been very kind in carrying out my suggestions in making this instrument (perfect, as I believe it to be) as modified from the one used at the West Riding Asylum, England, and described by Mr. Bevan Lewis in the Journal of Anatomy and Physiology. Mr. Walmsley, 921 Chestnut Street, Philadelphia, has kindly furnished the cut for illustration.

The majority of sections that I have made with the instrument are of fresh tissues, but I find a great convenience in the use of it for cutting tissues which have been partly or completely hardened, whether by aqueous solutions or alcoholic. When alcohol has been the hardening agent it is necessary to remove it by soaking the tissue in water for a short time before the specimen can be frozen. If the tissue is thoroughly hardened it is necessary merely to freeze it fast to the plate, which can be done almost instantly. I have found very great advantage from the use of the instrument in making sections of membranous tissues, such as the intestine, an arterial or venous wall, or a thickened pleura, or the peritoneum, — tissues ordinarily very difficult to embed. To get vertical sections of these tissues I first spread out a drop of the gum solution on the brass plate, then with two needles or pair of forceps hold the membrane so that its edge just touches the plate; in an instant the spray directed into the aperture of the tube freezes the gum solution and fixes the tissue in place; then, removing the nozzle of the atomizer tube from the aperture, I direct the spray directly on the tissue, taking care that the current is parallel to the length of the membrane; in almost as short a time as is required to fix the membrane to the plate the whole is frozen and stands erect in a vertical plane, provided that at the moment of freezing a slight tension is exerted by the needles or forceps. If the position in which the tissue becomes fixed is not satisfactory a warm breath relaxes it in a moment, and the adjustment can be corrected. In making sections of such delicate tissues or very small fragments it is essential that the blade of the knife should be kept cold.

Another and very important use which I have made of the instrument — and an employment destined to be more and more commonly made of it — is the examination of tissues from the living subject. The surgeon in excising new growths is desirous of carrying his scalpel through perfectly healthy tissues, and of removing all the surrounding parts which are becoming infiltrated with the malignant products. The determination of this question, and therefore the completeness of the operation, is often a difficult matter. It is not possible with the naked eye to be absolutely certain that all the affected parts have been removed, and how frequently it happens in examining with the microscope the periphery of tumors after removal, for example, tumors of the breast, that a deposit of malignant cells is found in the adipose tissue, often far from the growth in the gland. A small fragment of tissue, whether suspected or not, can be immediately frozen and cut, and the examination made before the wound of operation is closed. I have within the last six months made several such examinations during operations at the Pennsylvania Hospital. Recently, also, through the kindness of my friend Dr. L. A. Duhring, I have had the opportunity of using the instrument in making sections of diseased skin taken from

living patients. The sections were made and mounted ready for microscopic examination before the blood had ceased flowing from the small incision. The fragments of skin were in some cases not one fourth of an inch in length, and probably less than one eighth of an inch in breadth,—fragments so small that the attempt to harden them in reagents resulted in their complete disintegration and loss.

Recently, also, I have been able to obtain sections of the contents of cysts *in situ*, both from ovarian tumors and from cysts occurring in a fibro-cystic growth of the uterus.

Now that the method of freezing is so widely and generally used in making sections of tissues, it is not necessary to defend the process from the charges formerly made against it, namely, of cold producing alterations in the cells, etc. In fact, the tables are turning, and those who use the old hardening process and the tedious embedding of tissues are called upon to defend their methods against such charges.

One word more concerning the subsequent manipulation and mounting of sections made by the freezing process. As before related, I usually transfer the sections to cups containing appropriate solutions, but frequently the sections are placed directly on the slide and there stained, etc., and mounted. By this latter method nearly all the cells contained, in a section are retained, even if displaced from their original site.

In mounting the sections, which in the first place were transferred to a cup, I usually place them on the slide and perform all the manipulations necessary while they are on the slide. The advantage of this method is that the sections are saved from the danger of breaking or tearing to which unhardened tissues are necessarily peculiarly liable in the process of transference from one dish to another. By this method the section is always floating, and rarely needs to be touched by the needles; the disadvantage is the greater waste of reagents.

The difference in the appearance of tissues sectioned by freezing and those cut after hardening in alcohol, for example, a normal kidney prepared by the two methods, is very great. A normal kidney hardened in alcohol more nearly resembles a section of contracted kidney made by the freezing process. I do not find that sections of frozen tissues when treated with the alcohol, necessary to transferring them to oil of cloves and dammar, are much altered by this reagent, at least not nearly so much so as when hardened by it previously to sectioning. In this brief notice of the freezing microtome and the uses to which I have applied it, only a few of my experiments have been mentioned, and I have not considered it necessary to speak of the various solutions, reagents, and staining fluids which I commonly employ. Different tissues require different treatment by reagents and staining fluids, and each worker has his own peculiarities and favorites. To make this part of the subject complete, a catalogue of the various organs of the body would be necessary.

RECENT PROGRESS IN ORTHOPÆDIC SURGERY.

BY E. H. BRADFORD, M. D.

Caries of the Spine; Plaster-of-Paris Jackets. — The advantages of Dr. Sayre's method of treatment of Pott's disease are shown in a paper written by Mr. Willett, of St. Bartholomew's Hospital, and published in the Hospital Reports.[1] Mr. Willett wishes "to express unhesitatingly the satisfaction he has experienced in the treatment of both angular and lateral curvature of the spine by suspension and the application of the plaster-of-Paris bandage," a method of treatment which he says is now adopted in all the large London hospitals. His conclusions are based upon sixty cases of caries of the spine treated according to Dr. Sayre's method. An analysis of these cases is given. He adds: "The most eloquent testimony in favor of Dr. Sayre's method is the eagerness with which children who have once experienced the ease which the plaster jacket has afforded them have craved to have it left on" when it has been necessary to remove it. Mr. Willett has not been able to satisfy himself that the change in the outline of the spine during suspension is due entirely to the pulling apart of the diseased vertebræ. He also finds that the time needed for a cure is longer than that stated by Dr. Sayre.

Dr. N. Shaffer, of New York, in a paper[2] read before the Academy of Medicine, points out the disadvantages of the plaster-of-Paris treatment. He says that plaster jackets are heavy and filthy, that excoriations and chafing may arise and progress without being known, and that the application is attended with danger and difficulty. He claims that as a support a plaster jacket is a failure when the disease is above the seventh dorsal vertebra, that the "jury-mast is inoperative, and that the principle of antero-posterior support is the correct one in the treatment of the affection." He believes that continued extension and counter-extension which could be maintained with any degree of efficiency is impossible.

In regard to the dangers attendant on suspension employed during the application of "plaster jackets," Mr. Willett mentions that vomiting occurs quite frequently while adults are suspended, and that in some cases there is fainting. In one case[3] syncope seems to have taken place during the application of a plaster-of-Paris bandage upon a child, accompanied by a temporary paralysis of the muscles of the neck. No fatal cases have been reported, except one mentioned by Mr. Willett. Vomiting began shortly after the application of the jacket; the jacket was removed, but the vomiting persisted, and the patient died in two

[1] Vol. xiv., 1878.
[2] New York Medical Record, No. 2, page 177.
[3] Lancet, February 8, 1879, page 214.

days. At the autopsy, a chronic dilatation of the stomach was found. The application of the jacket was apparently the exciting cause of death, though the method of treatment can hardly be blamed for the termination of the case, as an unexpected organic lesion was discovered.

Respiration is not much interfered with, according to Mr. Willett, by the plaster-of-Paris jacket; in two patients, however, both paralyzed from disease in the upper dorsal vertebra, an attack of acute bronchitis produced such urgent dyspnœa that it was necessary to remove the jacket. Two somewhat similar cases are mentioned by Madelung.

To avoid the difficulties and dangers of suspension in the usual way, Dr. Reid[1] recommends a modification of the apparatus described by Dr. Sayre. The arrangement for suspending the head and neck is similar to that in general use, except that a separate pulley and rope are used for the head. Suspension of the trunk is made by means of adhesive plaster applied to the trunk. Plasters "two and a half inches wide are applied along the back, across the shoulder down the body, leaving a loop (above the shoulder) for suspension." An ordinary bandage is wound round the body to retain the plaster, a rope passed through each loop, and the patient can be hoisted and hung without danger as long as necessary. The plaster-of-Paris bandages are applied in the ordinary way.

Walker[2] believes that suspension is not a necessary part of the treatment of caries of the spine. He writes: "That a jacket should be effectual, it is a *sine qua non* that it shall be applied when the spine is in such a position that the diseased vertebræ shall be free from all pressure, and the deformity, if deformity exist, be reduced to a minimum. This condition is found when the patient is suspended, as recommended by Dr. Sayre, but it also obtains in an equal degree when the patient is laid flat on the back."

To make the application of a bandage on a patient in a recumbent position practicable a many-tailed bandage is used. The separate strips are soaked in plaster of Paris mixed with water, to which mucilage of acacia is added to prevent too rapid setting (proportions, one pound of plaster of Paris, one ounce of mucilage of acacia, and eight ounces of water) of the plaster. The strips are arranged and the patient is laid upon them; they are then folded around the patient. Two layers of bandages are usually enough for a child, while three are needed for an adult. Mr. Walker summarizes his opinion as to the treatment of caries of the spine, based upon an experience of seventeen years, as follows: "The main object of the treatment of angular curvature of the spine should be the maintenance of the affected bones and joints in a state of absolute rest, and that in the position most favorable for the

[1] New York Medical Journal, July, 1878, page 37.
[2] British Medical Journal, March 1, 1879, page 306.

cure of the disease without deformity. This position is found when the patient is placed comfortably in a recumbent position." [1]

On the continent of Europe the treatment of caries of the spine has been until recently almost entirely the enforcement of rest in a horizontal position. Kormann,[2] in a very comprehensive review of the literature of the treatment of disease of the spine, quotes from all German authorities on the subject, who were almost unanimous against any treatment except that requiring confinement to bed.

In a discussion at the French Academy,[3] the opinion of the leading French surgeons on the subject was brought out. Verneuil, Despres, Marjolin, Trelat, Ollier, are all quoted as in favor of treatment by the enforcement of absolute rest in a horizontal position for a long time.

Madelung, of Bonn,[4] however, has recently published a paper in which he expresses great satisfaction in the new method of plaster-of-Paris treatment of caries of the spine introduced by Dr. Sayre. He has tried it in thirty-eight cases. He mentions that the method is finding favor in Germany, and has been accepted by Langenbeck, Hueter, and others. He thinks the principle underlying the treatment introduced by Dr. Sayre has been sufficiently demonstrated to be regarded as established, although the technique may be improved upon hereafter.

Dr. Wyeth,[5] and Dr. Stillman [6] who claims priority, describe a method of treating spinal curvature by continuous extension. A plaster-of-Paris jacket is applied, consisting of "two segments which come nearly together at the point at which the lesion is situated;" these two are connected by rods, which are arranged so that they can be elongated and the amount of pressure upward and downward regulated at will. In the discussion which followed Dr. Wyeth's paper before the New York County Medical Society, Dr. F. H. Hamilton stated as his opinion that the value of extension of the spine in the direction of its axis was not as great as has sometimes been supposed. The muscles which are constantly strained in the effort to prevent the body from suddenly falling forward and causing painful pressure upon the seat of disease are relieved by extension, but if the patient is suspended no extension is made which reaches to the seat of the disease. A plaster jacket is incapable of maintaining extension of the spine. When a plaster jacket is applied, the arms being lifted, the chest is expanded; when suspension is removed, the thorax collapses and "telescopes within the plaster jacket," and extension of the spine becomes practically nothing.

[1] See also Owen, Lancet, November 23, 1878, page 734.

[2] Bericht über Heilgymnastik u. Orthopædie, Schmidt's Jahrbuch, 1878, Bd. 179, No. 9, pages 265 and ff.

[3] Gaz. hebd., December 7, 1877, page 780.

[4] Berlin. klin. Wochenschr., February 5, 1879, page 57.

[5] Hospital Gazette, January 30, 1879.

[6] New York Medical Record, February 22, 1879.

As a substitute for plaster-of-Paris bandages, Mr. Adams[1] recommends a preparation of felt, which, when warmed, is quite flexible, but which becomes hard in a few minutes.

Dr. Coover[2] uses silicate-of-potash bandages instead of plaster-of-Paris bandages. The former are much lighter, but they require three hours in order to become dry and hard.

Dr. Gibney gives the following figures to show the results of treatment of caries of the spine, as indicated by the tracings of the spine in one hundred and six cases. The treatment consisted of the application of a corset strengthened by strips of steel (the details of which are given). In ninety-two there was no increase of curvature. In four the curve there was a decrease. In fourteen there was an increase of these of one eighth to one half an inch. Of these, thirty were under observation from two to six months; ten, six to nine months; eighteen, nine to twelve months; twenty-six, one to two years; four, two to three years.[3]

(*To be concluded.*)

THE MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.[4]

ADJOURNED MEETING.

APRIL 21ST. *Conclusion of the Discussion on the Abuses of Medical Charities.* — Dr. F. R. Sturgis, the author of the paper under discussion, gave a *résumé* of the principal suggestions for the institution of reforms which had been made by the various speakers at the last meeting, and spoke particularly of the points raised by Dr. Piffard: that this society had no authority to control the action of the profession, and that it was no use to appeal to the legislature for the prevention of the organization of still other dispensaries, since, according to the present law, they were obliged to grant a charter for such an institution to any five individuals who chose collectively to apply for one.

Prof. D. B. St. John Roosa, president of the New York State Medical Society, said that he wished to speak mainly on two points. In the first place, he agreed with Dr. Sturgis that the medical profession was to blame for the present condition of affairs, and he believed that the evils existed not only in the dispensaries, but also in the large hospitals. He thought it a crying shame that wealthy patients should be treated in elegant private rooms in these institutions, and yet that the physicians or surgeons who attended them should be

[1] British Medical Journal, August 24, 1878; also Lee, Philadelphia Medical Times, March 15, 1879, page 277.

[2] Philadelphia Medical and Surgical Reporter, April 13, 1878, page 281.

[3] For other references in regard to the treatment by plaster jackets, see Lancet, June 23, 1877; February 2, 1878, page 167. British Medical Journal, February, 1878, page 280; January 5, 1878. Edinburgh Medical Journal, September, 1878, page 215. Dublin Journal of Medical Science, December 1, 1877. Glasgow Medical Journal, September, 1878, page 404. Medical Press and Circular, September 4, 1878, page 180. Cincinnati Lancet and Clinic, December 7, 1878, page 429.

[4] Concluded from page 611.

allowed no compensation. These were, therefore, not hospitals at all, in the proper sense of the term, but simply boarding-houses for people who wished to shirk their doctors' bills; and he considered such practices a fraud upon the dead men and women who had given their money for the establishment and maintenance of these so-called charities. If the medical staff connived at this outrage, it was a great wrong to themselves, and a still greater wrong to their professional brethren. The second point was that the medical profession could remedy the evil if they should unitedly take a firm stand, and absolutely refuse to attend any patient whatever (whether in hospital or dispensary) who was able to pay a fee. This unanimity of action, however, was essential to the success of the movement, or else the whole matter would come to naught. But, even if we failed now, Dr. Roosa believed that this agitation would have great influence in molding public opinion, and would go far towards bringing about that time when the profession would refuse to be dictated to any longer, and would demand the desired reforms as a matter of right. He felt perfectly confident, he said, that the day was coming when only paupers would be treated in dispensaries, and only paupers would be lodged in hospitals.

Prof. Willard Parker said that when he first came to New York, forty years ago, the condition of affairs here was entirely different from what it is now. Then there was only one hospital, the New York (which was indeed the only hospital in the city for more than eighty years), three dispensaries, and one eye infirmary; and there was no trouble at all, as these institutions were ample for the care of all the sick poor, and the physicians had plenty of work among the better classes. The population was then estimated at three hundred and twelve thousand. About the time of the great Irish famine, in 1846, however, there commenced an enormous influx of foreign immigrants (so that by 1850 there had been an increase of more than two hundred thousand in the population), and since then, with the growth of the huge tenement-house system, there had occurred a complete change in the city. With the presence of so many suffering poor in their midst, the people of New York (whom he believed to be more ready to respond to appeals for charity than any others upon the face of the globe) felt imperatively called upon to provide for their wants. About the year 1850 St. Luke's Hospital was founded, and since then hospitals and dispensaries had been multiplied to a marvelous extent, and, indeed, until they had become in many instances a curse rather than a blessing. There was therefore, at the present day, far too much indiscriminate charity, and people seemed to think that when they had given a sufficient amount of money their responsibility ended, not taking the trouble to see that it was judiciously expended by those to whom they entrusted it.

There were three classes in the community requiring the services of the medical profession: First, the well-to-do people, who paid the doctor cheerfully. (He was sorry to say, however, that this class was now considerably smaller in proportion to the population than it was forty years ago.) Second, the honest poor, or "God's poor," as they were sometimes called, who did the best they could, and were sure to pay the doctor sooner or later, although it might be but a small fee. Third, the pauper class, or "the devil's poor," of which there was an enormous number in this city at the present time, who

never paid anything at all, and who were dependent on the taxpayers for their support. The curse of intemperance, he thought, was to a great extent responsible for the large proportion of this class in the community.

The only remedy for the abuses mentioned that Dr. Parker could see was for the medical profession to make a strong effort and help itself, and in this he believed that they would be seconded by the taxpayers of the city. Such an effort would be directly to the advantage of (1) the physician, (2) the taxpayer, and (3) the recipient of charity. The tendency at the present day was to make drones out of a large number of the masses, altogether unproductive, and only a curse to the community in which they lived. As long as they were fed, clothed, and taken care of when sick by the city, or by charitably disposed private individuals or institutions, there was no incentive whatever to help themselves, and people thus accepting the bounty of others soon lost all sense of self-respect. As soon as these people were compelled to work for themselves, however, the manhood in them would assert itself, and they would no longer be the dependent creatures that they were before. He thought that it would perhaps be a good thing that this society should make the request of the managing boards of the various dispensaries in the city that they should appoint delegates to hold a conference with a special committee appointed for the purpose from the society, in regard to the remedying of the abuses which now prevail in these institutions, and that it was desirable that this committee should strongly urge upon the members of the boards the advisability of charging all patients who could afford it a small sum for medicines, as had been done at the New York Dispensary.

Dr. M. H. Henry believed that there never was an evil in the world which could not be remedied. Here he thought the remedy to be that medical charity should be confined exclusively to the regular district dispensaries in the city, and that these institutions should treat only the really destitute. Another aid to the removal of the abuses would be to open all hospital and dispensary appointments to competitive examinations; and still another, to diminish the number of physicians annually graduated by requiring examinations preparatory to attending lectures, and by generally raising the standard of medical examination. There should properly be only about one physician to every thousand inhabitants, but if we were to go on at the present rate of turning out doctors from the various schools, we would soon have one for every fifty. If these matters were attended to, he believed that the medical men of this city would be able to make a respectable livelihood.

Prof. A. Jacobi said that there could be no doubt that if there were fewer physicians there would be much less abuse to complain of, and he agreed with Dr. Henry that the present manner of making dispensary and hospital appointments was radically wrong. Whenever a vacancy occurred there were dozens of applicants for the place, all of whom based their claims to it upon the number of signatures of prominent medical men which they were able to show upon their letter of application, and there were many physicians of eminence who were willing to sign anything of the kind that was presented to them. Another abuse was that there were large numbers of men who used their dispensary appointments for making practice for themselves out of the better class of patients, while properly the dispensaries, and college clinics as well, should

refuse to treat any but the absolutely poor. He thought it was a terrible mistake, and one which would make the abuses greater than ever, to charge dispensary patients ten cents for prescriptions, as proposed by Dr. Sturgis. These institutions were established only for those who were not able to pay this amount, and this plan was scarcely less demoralizing to the public than that now in vogue in the out-door department of the New York Hospital. If this method were to prevail, the public would soon come to believe that ten cents was all that a physician's services were worth, and it seemed to him a serious question whether it would not be really better that all the dispensaries should be wiped out of existence.

After some further discussion it was unanimously resolved, on motion of Dr. Roosa, that it was the sense of the New York County Medical Society that the attending physicians and surgeons to the hospitals and dispensaries of this city should diligently inquire into the circumstances of all patients presenting themselves for treatment in them, and that they should refuse to treat those whom they had reason to suppose were able to pay a physician's fee.

EMMET'S PRINCIPLES AND PRACTICE OF GYNÆCOLOGY.[1]

From the exceptional advantages which Dr. Emmet is known to have had for a quarter of a century in a hospital devoted exclusively to the diseases of women, together with a large private practice in the specialty, the profession have waited with justifiable impatience for the results here embodied, and we feel confident that these expectations will not be disappointed.

Though treating especially of the functional and surgical diseases peculiar to women, it is not wholly the book of a specialist; it is eminently the production of one familiar at least with general practice, and a book which no man in general practice should be without. The time happily has now passed when any physician or surgeon can afford to be ignorant of the ailments here described, — of the reflex or neurasthenic disorders radiating from that autogenetic zone of the female nervous system, the pelvis.

He who treats the heart or the liver, the stomach or the brain, in ignorance of the fact that the uterus and the ovaries are the *fons et origo* of the most intractable and distressing disorders; that they play a much larger part in woman's organization than the mere production of offspring, will soon find himself distanced by wiser and more far-sighted competitors. The only danger is that the success which has of late followed the treatment of female diseases should give the impression that it is owing to local applications alone, and thus tempt beginners, especially, to neglect of general and constitutional measures, without a competent knowledge of which no special practice can be as a rule satisfactory. This is a point which our author fully recognizes, and one the observance of which we may be sure is one of the prime factors of his acknowledged success. He says, "No man can prove successful as a gynæcologist who has not mastered the principles of medicine, and stored up experience in the general treatment of disease."

[1] *The Principles and Practice of Gynæcology.* By Thomas Addis Emmet, M. D., Surgeon to the Woman's Hospital of the State of New York, etc. With one hundred and thirty Illustrations. Philadelphia: Henry C. Lea. 1879.

The limited space which the JOURNAL can afford renders impossible any satisfactory digest of such a book. Every general practitioner will be well repaid for a careful perusal: the operator for its manifold practical suggestions; and the general practitioner for the knowledge which he will get of the protean forms which disease assumes in the female organization, which may all be due solely to local causes, and the treatment of which, if these causes be ignored, becomes merely empirical. Most of us are familiar with cases of metrorrhagia, dyspepsia, cardiac irregularities, neuralgia, and general nervous derangement, which, after being treated for years unsuccessfully by those who "disapprove of local treatment," are finally discovered to be dependent on functional or organic pelvic disorder, admitting of easy and prompt solution when properly diagnosticated.

The book opens with a discussion of the influence of climate, education, and social conditions upon general development, and especially that of the female nervous system. Our author believes that the physique of women in this country is deteriorating, an opinion held in common with many others, but one in which we are unable to coincide. That an unhealthy development of the nervous system, due to the causes which he enumerates, is often manifest is unfortunately and undeniably true; but that on the whole the women of this country are physically better than fifty years ago is a belief which we think might easily be verified. Possibly the large experience of the author in the class of cases which he describes has unfavorably influenced his judgment. It has been a pleasure to feel that we are fast outgrowing the thin, skinny, nervous type formerly reckoned a national characteristic, and that the fuller type of fat and blood is becoming sufficiently common, owing to the more luxurious living incident to the increased wealth of the country. When the rage for coeducation and education in unfeminine directions gets its inevitable check, and women receive a fuller and more physiological feminine culture, there is no reason to apprehend a greater nervous development than such as is unavoidably incident to our climate, and which is perhaps not undesirable as the foundation of the energy and "go-aheadativeness" of the American people in contrast with the more stolid, lymphatic temperament of our European neighbors. With this protest, however, we readily admit that the defects in physical training during the transition period of ten or twelve years in young women of the so-called higher classes are very great. Whether the capacity, in that special class, to produce large families is diminished thereby is somewhat doubtful. Is it not often a question of ethics rather than physiology? Is it not that women *will not*, rather than that they *cannot?*

The ensuing chapters on the principles of treatment, and especially that portion treating of the pelvic circulation, should be carefully considered as of elementary importance by every one who attends to his own uterine cases, all experience proving that success is closely dependent upon it. The articles on ovulation and menstruation are reinforced by, if not based upon, the analysis of nearly twenty-five hundred cases occurring in the author's own service. The question of the, complete denudation of the mucous membrane, or its mere thickening, during each monthly period is merely glanced at, as not coming within the scope of the work; but we confess to disappointment that such a

large field of observation should not have afforded some elements towards the solution of this vexed question. The author's large experience in atresia of the vagina gives to his remarks original value, and the same also of treatment of retained menses from imperforate hymen. Unlike many high authorities, he contends for a free opening in cases of menstrual accumulation, with rapid evacuation and washing out of the uterine cavity.

To the ordinary practitioner perhaps no part of the book will be of more use than that relating to the ætiology and treatment of uterine displacements. He does not admit that anteversion *per se* is a malposition, it becoming so only when in addition the uterus is prolapsed. This is probably true, and accounts in a measure for the utter want of success in devising any effectual anteversion pessary which does not support the whole organ at its proper plane in the pelvis, — the restoration of the prolapse being all that can be accomplished by such means.

For the restoration of a retroversion he relies upon the finger alone. In many cases, doubtless, this — or, what is perhaps better, the "genu-pectoral position" — is quite sufficient, but the less experienced will often sadly miss our author's sleight of hand, and find the sound to accomplish the object more easily and effectually. Unfortunately, these are the very ones in whose hands the sound may become a two-edged sword, and we recommend to them first a trial of Dr. Campbell's method before resorting to an instrument which may leave the latter end of their patient in a worse state than they found it.

With regard to pessaries, we think he has struck the key-note in the following sentences: "It is not so much the position [of the uterus] which is to be corrected, as it is the removal of the obstruction to the circulation." "When the instrument fits properly, and has corrected the prolapse, the patient will be unconscious of its presence." And as to outside fixtures, "If there were no other objection, the fact that the patient has to be manipulating it constantly would be sufficient to condemn it, and no better plan can be devised for rendering a woman a confirmed invalid. His views upon flexures, the use of the stem pessary, and the operative measures of Simpson and Sims are worthy of careful attention, if only for their bearing upon dysmenorrhœa and sterility.

The author's method of restoring a completely lacerated perinæum has now become tolerably well known, and is founded upon careful, long-continued study of the failures by the old method. It is difficult to see how one can fail to appreciate his way of catching up the straightened-out ends of the torn circular fibres and restoring them to their circular position, though any description is unsatisfactory until the process has been witnessed. We regret to see no allusion to the method devised by Dr. Jenks, of Detroit, for denuding the mucous surfaces, which for rapidity in execution, cleanliness, and freedom from hæmorrhage is a great advance upon the old methods. To the author, with his skillful and experienced manipulation, this denudation with hook or forceps, scissors or knife, is an easy matter, but he is writing for the use of those who are rarely gifted with his dexterity.

Inversion of the uterus, the comparative rarity of which may be estimated by West's statement that it was not once met with in a total of one hundred and forty thousand cases occurring in the Dublin Lying-In and the London

Maternity hospitals, has attracted much attention in this country of late years from the considerable number of cases reported. Dr. Emmet does not believe in the professional tradition that inversion is generally owing to undue traction on the cord. In this he agrees with Schroëder. It must be confessed, however, that West's statement is rather confirmatory of the old belief. The skill which governed the one hundred and forty thousand labors, presumably without any undue traction, it would seem, could have had no influence in preventing an occasional occurrence of the displacement in so large a number of deliveries, if irregular muscular contractions and atrophy from fatty degeneration be, as supposed by Schroëder, the chief cause of inversion. On the other hand, that traction is a less common factor than has hitherto been supposed may well be admitted in view of the force that is often used with impunity both by traction and by expression from above the pubis, and that such forces only become dangerous in an organ diseased or atrophied in certain parts.

The importance and difficulty of the diagnosis are strongly emphasized by the statement of instances which have occurred in New York, "where the mistake has been made of removing the whole organ for supposed polypus, and he gives two instances in which he was himself nearly led into a similar error. A good *résumé* of the various methods of reduction, with the principles involved, is within a compass which admits of easy reference by any one who may meet with such a case.

The subject of lacerations of the cervix uteri may be fairly said to be original with Dr. Emmet. The great frequency of the lesion, its causes, its effects, especially in relation to neuralgia, epithelioma, and hypertrophy, so called, and its surgical treatment were neither known, nor hardly suspected, until demonstrated by him; and though received with great incredulity at first, it has now become well recognized, and the operation as well established as any other in surgery. Its importance in a medico-legal point of view, in reference to abortion, the use of the forceps, etc., is evident to all. He believes that the intelligent "recognition of this lesion under its different forms" will afford to the observer "a new explanation of all his cases of elongated or hypertrophied cervix," and therefore that cauterization or ablation, except for malignant disease, is malpractice. Cases of apparently elongated cervix, found in the virgin uterus, are, in his opinion, really due to atrophy and prolapsus of the whole organ, the deformity disappearing when examined in the knee-elbow position, the uterus shutting up and "falling together as would an old worn-out spy-glass if held upright." Should this view prove to be correct, we shall hear less hereafter of the electro-cautery and resulting stenosis of the os.

In discussing vesico-vaginal fistula he pays a just and generous tribute to one from whom in many things he has been compelled to differ. He says, "From Dr. Sims's hand the operation [for closure of the opening] was accepted by the profession; it was immediately put into successful practice, and to the present day it has not been materially modified for the better, either in its principles or in its mode of execution." To the obstetrician this chapter is perhaps of more practical importance than any of which the book treats. The possibility of spontaneous closure of many of these injuries under the use of

hot-water injections shows the urgent necessity of their early recognition before such changes have occurred in the tissues as may render anything short of operative interference nugatory. He controverts the common idea that the opening is due to instrumental interference, asserting, on the contrary, that it is owing to neglect of the catheter, and to delayed delivery, for which the forceps should have been sooner applied. As the result of the experience of one who has operated for fistulæ into bladder or rectum on considerably over two hundred cases, the following sentences deserve attention: "I do not hesitate to make the statement that I have never met with a case of vesico-vaginal fistula which, without doubt, could be shown to have resulted from instrumental delivery." "I have claimed that any one who is familiar with the mechanism of labor, although wanting in practical experience, would do less damage in applying the forceps in such a case than would result if the delivery were left unaided." "While it may be true that instruments are often resorted to without urgent necessity, we must not ignore the consequence of allowing labor to be protracted. Vesico-vaginal fistula cannot occur as the consequence of a slough if delivery is always brought about as soon as the head fails to recede after each pain."

With the exception of the subjects of cystitis and cystotomy, for which, as is well known, the author has done so much, but for which we have no space, the remainder of the volume is devoted to diseases of the ovaries. We could have wished for something more encouraging as to the treatment of those cases of irritable and neuralgic ovary which are now the opprobrium of the profession, —cases in which one resorts, in a sort of blind despair, to every possible and impossible mode of relief; in which the "fat-and-blood" treatment, now so popular, proves too often a delusion, even the removal of both ovaries *à la* Battey being not always a success; and we are forced to the conclusion that it is indeed "difficult to afford any marked relief during the menstrual life of the woman." The ovariotomist will peruse with interest the chapters devoted to that subject, which give, besides the valuable experience of the author, a concise view of diagnosis and the various operative procedures of the best recognized authorities.

The above is but a meagre summary of the important points, the valuable practical suggestions, with which the book abounds. Many of the subjects, as cellulitis, hæmatocele, uterine fibroids, etc., we have not even alluded to. Every practitioner should own the book, and we can promise that he will find embodied in it an experience which will be of daily service to him.

The statistical tables so freely interspersed are made to bear so directly upon the text as to lose for the reader much of their usual dry aspect.

The illustrations, between eight and nine hundred in number, are almost exclusively from original sketches of the author. It would seem almost hypercritical to notice the defects in style in a work of such magnitude, written amidst the cares and pressure of extensive professional duties. Such as they are they will doubtless receive correction in subsequent editions.

G. H. L.

GODLEE'S ATLAS OF ANATOMY.[1]

THIS work consists of a series of plates to be issued at intervals, each fasciculus being accompanied with an installment of description and comment. The plates will form a large folio volume, the text one in octavo. Part First is before us. The four plates which it contains are devoted to the anatomy of the neck, and deserve the highest praise, both for the judgment and skill shown in the dissections, and for the beauty with which they are represented. Our only criticism is that some of the numerals and letters indicating the parts are not sufficiently clear. In the text the plates are described, and there are many practical surgical remarks which are of much value. The author shows himself better read in recent German anatomical literature than most English teachers of this branch appear to be. We hope in future numbers to see sections as well as dissections, for the work is so good that we shall be disappointed if it is not brought up to the latest requirements. T. D.

GEGENBAUER'S COMPARATIVE ANATOMY.[2]

BOTH teachers and students of comparative anatomy will be glad to find a translation of this valuable manual. It is made from the second German edition (that of 1877), which has several advantages over the first. The few remarks we shall make apply solely to the section on vertebrate animals. We are often inclined to regret the absence of more details, especially with regard to man and the higher apes, but on reflection we see that they do not fall within the plan of the work, which is to give a strong outline of the subject, leaving the details to the knowledge of the teacher and to the private research of the student. Gegenbauer's work is characterized by clearness and good sense. As an instance of the latter, especially, we would quote from his remarks on the foot of mammals: "In addition to its primitive function as an organ of support and of movement, the foot may be developed into a grasping organ; when this happens the foot comes to resemble in many points the end of the fore limb or hand. But in all essential points of structure it is still a foot so long as we hold to the anatomical conception of what hand and foot are, and do not put functional relations into the foreground; and if we do, then the proboscis of the elephant is a 'hand' also." Our author's opinions on the vertebral theory of the skull strike us as very valuable. The crude notions of the older transcendental anatomists that the segments of the skull are modified vertebræ may be considered exploded. On the other hand, there is no doubt that the notochord does extend into the base of the skull, and we must admit a strong resemblance between the branchial and the visceral arches.

[1] *An Atlas of Human Anatomy.* Illustrating most of the Ordinary Dissections and many not usually practiced by the Student, with an Explanatory Text. By RICKMAN JOHN GODLEE, M. S., F. R. C. S. Philadelphia: Lindsay and Blakiston. 1878.

[2] *Elements of Comparative Anatomy.* By CARL GEGENBAUER. Translated by F. JEFFREY BELL, B. A. The translation revised and a preface written by E. RAY LANKESTER, M. A., F. R. S. London: Macmillan & Co. 1878.

When we remember that the permanent vertebræ are the results of a secondary segmentation, there is little difficulty in believing that a portion of the skull, corresponding in extent to the cranial end of the notochord, is formed by the fusion of a number of vertebral elements; but in front of this there is another portion of a different, or at least secondary, origin, and it is pretty evident that segments of the skull do not correspond individually to vertebræ. Information is also gained from the nerves, as those which arise in front of the notochord have no resemblance to spinal nerves. Gegenbauer believes that at least nine vertebræ enter into the composition of the cranium.

The work is well translated and printed. T. D.

THE AMERICAN OPHTHALMOLOGICAL SOCIETY.[1]

This volume, although it contains papers of undoubted clinical value, is not satisfactory as a product of three years' activity of the society. The chief causes of its unsatisfactory nature are the relatively small amount of evidence of independent observation, and the apparent neglect of the greater clinical questions that now interest the ophthalmological world; there is, besides, a certain flavor of "specialism" in some of the papers, which to the surgeon lack almost everything but this flavor. It will be a bad day for "specialties" when it becomes a custom to cover under their veil work which will not bear the light that illumines the science of surgery.

Dr. Bull furnishes careful studies of certain syphilitic diseases of the lid and conjunctiva, and of amyloid infiltration of the lid and orbit, which, like all of Dr. Bull's recent contributions to the pathology of these parts, are valuable additions to ophthalmological literature. Drs. Wadsworth and Putnam give a condensed account of an interesting physiological study of the intra-ocular circulation, and Dr. William Thomson describes an ingenious new ametrometer, based upon the principle of measuring the circles of diffusion formed around the image of a small flame upon the retina of an ametropic eye. Several of the other papers are clearly recorded, and interesting clinical contributions, especially those of Drs. Strawbridge, Dixon, Webster, and Vermeyne. A plain, unvarnished account of some of the weaker papers would no doubt be of great benefit to ophthalmological literature, but it would be rather too delicate a task to attempt it in a journal devoted to the general literature of the profession. D. H.

DA COSTA ON HARVEY.[2]

This little book is a very prettily written essay, which we cannot decry, though we do not quite agree with the author. It may be that Harvey deserves to be called the discoverer of the circulation. He was the first to write a book on it alone. He probably was the first to appreciate the full importance of the question. He described and demonstrated it with rare skill;

[1] *Transactions of the American Ophthalmological Society.* 1876, 1877, 1878.

[2] *Harvey and his Discovery.* By J. M. Da Costa, M. D. Philadelphia: J. B. Lippincott & Co. 1879.

but we cannot shut our eyes to the merits of his predecessors. When Harvey went to study in Padua the idea was not new, either in Italy or Spain, though its full bearings had not been grasped. We may claim for him the honor of having made the discovery a fact instead of a theory.

MARSH ON SECTION CUTTING.[1]

We should like to speak kindly of this little work, for the author, no doubt, meant to do a service to beginners. The trouble is, however, that though Rutherford and Schaefer may have left some gaps in their admirable handbooks, this book does not fill them. It has one or two little points that are perhaps new, but it does not give information on many subjects which a book of its title should. To be of any real use it should teach more than it does. Still it is not without merit. In his preface the author calls his book a "manualette," and though the word is new to us, it seems, somehow, very descriptive of the nature of the work.

NATIONAL HEALTH LEGISLATION.

During the present session of Congress no public health legislation has been enacted, but a bill has been reported by the committee on epidemic diseases, which it is understood has been prepared by the National Board of Health at the request of the committee, and is so comprehensive in its character, and shows such proper consideration for the conflicting interests necessarily involved in any scheme for national health legislation, that it is to be hoped the bill will receive proper consideration and action before the present session is terminated. By the terms of the bill the National Board of Health are required to frame sanitary rules and regulations under which vessels coming from ports where infectious disease prevails may enter ports of the United States. The regulations are to provide for the careful inspection and sanitation of vessels at foreign ports before departure for the United States by medical officers detailed from the army, navy, or marine hospital service, one of whom may be stationed at any of the foreign ports where infectious diseases prevail; and on the arrival of such vessels at United States ports the local health authorities are required to demand the certificate of the medical officer at the port of departure that the sanitary regulations prescribed have been complied with, and to subject the vessel to such sanitary measures at the port of entry as may be directed by the National Board of Health. In the event of their failure or neglect to do so the board may request the president to detail a medical officer of the public services for the execution of this duty.

On the outbreak of cholera, yellow fever, or other infectious disease within the United States, the board is empowered to take such measures as will prevent the spread of the diseases from one State to another, by establishing stations, and by the erection of temporary buildings on the lines of railroad or river

[1] *Section Cutting.* A Practical Guide to the Preparation and Mounting of Sections for th Microscope. By Dr. Sylvester Marsh. Philadelphia: Lindsay and Blakiston. 1879.

traffic between States, for the disinfection of persons, baggage, vessels, or other vehicles of contagion, and may enforce such rules and regulations as have been prescribed therefor.

All consular officers of the United States are required to make weekly reports of the sanitary conditions of the points at which they are stationed to the board of health, who are to obtain as far as possible, by the voluntary coöperation of local health authorities, all accessible information bearing on the state of the public health of places within the United States, and to transmit weekly reports of the same to local health officers and other proper authorities.

The board are directed to cause investigations to be made into the diseases prevailing among domestic animals, especially those used for food, and to ascertain the best means for preventing and controlling such diseases. The board are also required to cause a thorough inspection of all animals arriving at the shipping ports of the country, and to make such notification and recommendation in regard to the prevalence of disease among such animals as may be deemed proper. These last provisions of the bill have been conceived in an eminently wise and scientific spirit, as the prevalence of disease among certain domestic animals is becoming a matter of vital importance to some of the most important interests of the country; and the required investigations may be much better conducted under the direction of the National Board of Health, composed as it is of men eminent for their professional and scientific attainments, than under the unprofessional departments of the government to which they have heretofore been entrusted. It should be borne in mind, too, that such investigations should be pursued in the highest scientific spirit of inquiry, with the view of adding to our knowledge of comparative pathology; this field has been but little worked, but is one from which most valuable information may be gathered in regard to the essential principles governing contagious affections, and the manner in which disease is communicated from one individual to another. The proposed detail of medical officers of the public services for executing the laws and regulations that may be made under the act is a wise provision, as there can be little question that these duties would be better discharged by these officers than by those appointed under the influences that too often determine the selection of the officials entrusted with the care of the public health.

The bill provides for the appropriation of six hundred and fifty thousand dollars for carrying out its provisions.

CROUP AND DIPHTHERIA.

The growing belief in the identity of croup and diphtheria lends interest to the discussion now in progress before the Royal Medical and Chirurgical Society of London on the report of the committee appointed some years ago to investigate the doubtful points regarding these affections, chiefly as to "whether there is such a disease as 'idiopathic membranous croup;' that is, whether membranous laryngitis exists independently of the diphtheritic poison." In the absence of clinical and pathological facts which are conclusive to all minds,

these questions can be decided only by the prevailing opinion of the medical world expressed through such bodies as the Medical and Chirurgical Society. The deductions of the committee, printed on another page, seem to have been drawn with a view to making their report unanimous, and, although doubtless as positive as the circumstances would admit, they were not sufficiently explicit to enable the members of the society to agree as to their exact meaning; hence the interpretations were conflicting. Many of the members were quite satisfied, from their own experience, that the diphtheritic poison was not the sole cause of membranous croup, but that various zymotic and non-septic influences might be held responsible. Dr. Wilson Fox referred to the casts of the bronchial tubes in plastic bronchitis as being analogous in structure to the croupous membrane, and as indicating the possibility of non-specific membranous disease. If the burden of proof rests upon those who wish to show that all cases of membranous croup are laryngeal or tracheal diphtheria, it is not probable that more dogmatic conclusions than those of the committee can at present be sustained; but of this we may be certain with regard to our own community, that of late years, since diphtheria has been prevalent, idiopathic membranous croup is a disease seldom heard of, and, in a family of children, no physician would now be justified in considering a case of primary membranous laryngitis as non-diphtheritic unless diphtheria could be positively excluded. Perhaps that is as far as it is worth while to go, since it is not likely that the discussion before the Medical and Chirurgical Society, which may be a prolonged one, will convince the many competent observers, especially those of an older generation, who have "had cases," that non-specific membranous croup is entirely a delusion of the past.

A MORAL DISEASE AND ITS CURE.

THE terrible crime committed last week in Pocasset, an Adventist "making a sacrifice unto the Lord," by stabbing through the heart his sleeping daughter, five years of age, and being fully sustained in the deed by the brethren of his creed, is a startling reminder of the powerful influences which are quietly at work in this little State, and is in our opinion the legitimate result of the teachings of certain influential men who by precept and example educate the masses to espouse any cause or belief which has the flavor of novelty or opposition in it. We were once assured by a colleague of his conviction that it was the mission of this community of ours to try all sorts of social or political experiments. It may be a harmless matter for the "sages" and "advanced thinkers" to dabble in them, but the spirit thus engendered will crop out in less tutored minds in the shape of some hideous form of fanaticism, such as lately has been witnessed. We trust there will be no talk about non-responsibility in this case. Whatever may be the precise condition of the murderer's mind from a nicely calculated scientific stand-point, or of the minds of the men, women, and children who uphold him in his crime, we feel sure that the moral atmosphere of this befogged community would be wonderfully cleared by a prompt infliction of the full penalty of the law.

MEDICAL NOTES.

— We are glad to learn that Dr. H. I. Bowditch is recovering from his recent injury, and is able partially to resume practice. In alighting from a horse-car some eight weeks since he fell, and it was found that the tendon of the quadriceps extensor muscle had been ruptured. Although seventy years of age he has sustained the accident without perceptible impairment of his general health. He has of course been prevented from attending the meetings of the new National Board of Health, but we understand that the members have had the benefit of his counsel and advice. Dr. Bowditch's reputation and popularity are so wide spread that the profession not only of Boston but of the whole country will be rejoiced to hear of his recovery. Dr. Knight, his partner, is slowly convalescing from a severe attack of rheumatic fever.

— The Rhode Island Board of Health was established to make investigations and reports with regard to the causes and prevention of disease, to perform the duties of cattle commissioners, to collect and report upon the vital statistics of the State, and to diffuse useful information among the people. It consists of six members, of whom four are physicians. The first report of the board is just published, consisting of articles on hygiene in public schools; dangers from wall-papers, poisonous cards and labels; prevention of kerosene accidents; kerosene; medical topography of Rhode Island; diphtheria; causes of ill health among women; dietetic value of alcoholic beverages; and the report of the secretary, — beside reprints of the Michigan circular on resuscitation of the apparently drowned, and Colonel Waring's excellent prize essay on typhoid fever. The report does not reach the standard of the best sanitary science in that State, while some parts of it, notably the instructions with regard to infectious diseases and *treatment* of diphtheria, are open to criticism. The board evidently has entered upon its duties with zeal and with hopes of a wide work and much usefulness.

— We are informed by the committee of arrangements for the annual meeting of the Massachusetts Medical Society on the 10th and 11th of June that surgical instrument makers and druggists desiring to exhibit their goods can do so only by first obtaining authority in writing from a sub-committee consisting of Dr. Amory, of Longwood, and Dr. J. O. Green, Jr., of Boston, of the committee of arrangements; and that under no circumstances will the society be responsible for any expense incurred by such exhibition. Applications must be received before June 1st.

— Dr. A. P. Beach, of Seville, Ohio, reports the birth of a child of the well-known giants, Mr. and Mrs. Bates. The father's stature is seven feet seven inches; the mother's, seven feet nine inches. At birth the child weighed twenty-three and three fourths pounds; its height was thirty inches; breast measure, twenty-four inches; breech, twenty-seven inches; head, nineteen inches; foot, five and one half inches in length. The secundines weighed ten pounds. The amniotic fluid amounted to six gallons. This is the largest child at birth of which there is any record.

NEW YORK.

— At the last regular monthly meeting of the County Medical Society, April 28th, Dr. D. H. Goodwillie read a paper on Extirpation of the Bones of

the Nose and Mouth by the Use of the Surgical Engine, after which Dr. George B. Fowler presented one on Intra-Vascular Alimentation: the Nutritive Value of Peptones. Dr. Fowler has recently been making some original investigations in regard to the use of digested meat as an aliment, and his experiments in this direction upon the lower animals have proved so successful that he has been led to the conclusion that peptone is much preferable to either blood or milk as an agent for intravenous injection. He furthermore reports that the results of his researches have been confirmed in a very satisfactory manner in one case in which it was employed in this manner in the human subject.

— At a recent meeting of the Academy of Medicine Dr. Abram Dubois was lected an honorary Fellow of the Academy, in consequence of his having contributed five thousand dollars towards the enlargement of its building, as well as other generous donations to the institution. At the last meeting, May 1st, Prof. Frank H. Hamilton read a paper on Posture as a Means of Relief in Strangulated and Incarcerated Hernia, in which he advocated placing the patient upon a steep inclined plane, with the head inverted, and gave a detailed explanation of the mechanism of reduction.

— The bill providing for changing the State Inebriate Asylum at Binghamton into an asylum for the chronic insane (supplementary to the Willard Asylum), to which allusion was made in the recent article on the New York State Charities Aid Association, published in the JOURNAL, has now passed both houses of the legislature, and will doubtless soon receive the signature of the governor.

— Mr. Palmer, the manager of the Union Square Theatre, has given the entire receipts of a matinée performance to the New York Foundling Asylum, no deduction being made for expenses. It was peculiarly appropriate that a representation of the beautiful play, Lost Children, now running at this theatre, should be given in aid of such a charity, since one of the principal characters in it is Vincent de Paul, the founder of the first foundling asylum, and two or three of the scenes are laid in this asylum in Paris.

— Two cases of death from hydrophobia are reported from Brooklyn.

CHICAGO.

— Prof. E. W. Jenks, who has occupied the chair of gynæcology in the Detroit Medical College since the organization of that school, has been elected to the place made vacant in the Chicago Medical College by the resignation of Professor Byford. — Prof. Daniel T. Nelson has resigned the chair of physiology in the Chicago School. His successor is not yet appointed.

— The management of the Cook County Hospital is just now receiving an overhauling at the hands of a committee of the board of commissioners, led by Commissioner Fitzgerald, who thinks the warden needs disciplining. The trial does not affect the medical board. It seems to have grown chiefly out of the scandal of an interne, a nurse, and the apothecary surreptitiously using the wash-room and dead-house of the hospital in which to clean the flesh from the bones of bodies they had procured for skeletons. The testimony differs as to whether the warden had given permission for these proceedings and for the use of the bodies of deceased patients.

BOSTON CITY HOSPITAL.

SURGICAL CASES OF DR. GEO. W. GAY.

Popliteal Aneurism; Femoral Artery tied with Catgut Ligature; Relieved. — T. L., laborer, aged forty-six years, entered the hospital September 26, 1878, and gave the following history: Three months ago he first felt a pain in the right popliteal space; a month later he noticed a tumor there of the size of a walnut, which has increased rapidly since that time. The heart is normal, and he has received no injury, although he appears to have been more or less dissipated. He is a large, powerful man, and has generally had good health. The right popliteal space was filled with a firm, elastic, pulsating tumor, which extended from the outer hamstring around on to the inner aspect of the thigh ten and a half inches. The vertical diameter was five and a half inches. The circumference of the right knee was two and three fourths inches greater than that of the left. The thrill and bruit were well marked, and the pain at times was excruciating. The patient was put to bed for a week, to get him accustomed to the confinement before any operation should be undertaken. Large doses of opium were required to procure relief from pain.

October 4th. The circumference of the right knee had increased two inches, and the skin over the aneurism was beginning to look red and irritable. It was now time to consider the different methods of treatment. The tumor not being confined to the popliteal space, flexion could do no good. The patient was too irritable to bear compression of the femoral artery, had it been practicable to employ it. The case did not appear to be a suitable one for any other method of treatment but the Hunterian operation, and that was accordingly done. The patient was etherized, and the femoral artery was tied four inches below Poupart's ligament with a double catgut ligature cut short. The wound was closed with sutures, and dressed with compound tincture of benzoin. The circumference of the right limb at the knee was one inch less after the operation than before it.

October 7th. Patient has been very comfortable, with the exception of a chill last night. Sutures removed. Wound closed by first intention throughout its whole extent. The ligature was never seen after the operation.

October 30th. There has been more or less pain in the right foot since the operation, but it could be readily controlled by opiates. The foot has been warm, and although the wrappings have been seldom disturbed there has been very little, if any, swelling. No signs of gangrene. The circumference of the knee is two inches less than at the time of the operation. The tumor was firmly bandaged. Ordered blisters and poultices.

November 30th. The tumor has diminished considerably since the last report, so that now, although the patient has been walking about for a week, the right knee is only about an inch and a half larger than the left, whereas it was four inches larger prior to the operation. The tumor is now soft, painless, and devoid of pulsation. Although much smaller since the operation, yet it has never shown any tendency to become firm and hard, as is usually to be expected in these cases. This result may take place in the future should a complete recovery be obtained. There is pulsation in the right femoral, one

inch below Poupart's ligament, and also in the anterior and posterior tibials. The foot is warm, free from swelling, and the pain not severe enough to require opiates. The great size of the aneurism, its rapid growth, and the happy results following the use of the catgut ligature are points worthy of notice. It is hardly possible to get a wound with ligatures hanging from it to unite by first intention. In many operations primary union would be obtained were it not for the silk with which the vessels are secured. Torsion in these cases is tedious and uncertain. But good catgut, carefully tied by three square knots, and the ends cut short, allows the wound to be closed throughout its whole extent. This material has been in use over two years in this hospital, and thus far it has always been satisfactory.

Wound of External Iliac Vein; Ligature; Death. — Mr. N., aged sixty-four years, was stabbed in the right groin with a common pocket-knife. He bled until he fainted, and on reaching the hospital was in a state of collapse; almost pulseless, surface and extremities cold and clammy, face pallid, and respiration slow and sighing. On applying warmth and giving stimulants reaction came on to a moderate degree. The hæmorrhage being controlled with two fingers thrust deep into the wound, the latter was enlarged two inches, and after much trouble, owing to the depth of the vessels and the profuse hæmorrhage when the pressure was relaxed, the vein was secured by ligatures above and below the opening. The knife had passed upwards and backwards beneath Poupart's ligament, and made a lacerated wound an inch long in the external iliac vein. A smaller vein was afterwards tied, and no more bleeding took place. But the patient never rallied beyond that stage of great restlessness which John Bell says is an almost infallible sign of death, and died the next day, about thirty hours after entering the hospital.

LETTER FROM LONDON.

The Care of the Insane in Great Britain. — Lunacy Laws.

Mr. Editor, — One of the results of the free communication between nations which is so striking a feature of the present age is that social reforms are instituted almost simultaneously in several different countries. In my last two letters I dwelt upon the English contribution toward the solution of a problem which, after having lain dormant for centuries, is being closely and practically studied in many countries at the present time, namely, the disposal of sewage. In my present letter I intend to deal with another subject which is claiming the attention of reformers on both sides of the Atlantic; I refer to the question of insanity in its legal and medical aspects. For a good many years the public in England, as a whole, and the profession had alike remained quiet in the belief that matters were pretty satisfactory as touching the guardianship of insane persons; but signs have not been wanting during the past three or four years that public confidence was becoming shaken, and this feeling of uncertainty has been growing so rapidly of late that the government, after issuing a royal commission to collect evidence and report upon the subject, is about to take steps to alter the existing state of things.

The question of legislation for the insane is one of comparatively recent origin, for the first legislative enactment for the protection of lunatics does not date further back than the year 1744. Up to that time their treatment had been of the most barbarous description. The present Earl of Shaftesbury, in introducing a bill to amend the lunacy laws in 1845, said in his speech, "the whole history of the world until the era of the Reformation does not afford an instance of a single receptacle assigned to the protection and care of these unhappy sufferers, whose malady was looked upon as hardly within the reach of medical aid. If dangerous, they were incarcerated in the common prison; if of a certain rank of society, they were shut up in their houses under the care of appropriate guardians; chains, whips, darkness, and solitude were the approved and only remedies." At the time of the Reformation, however, Henry VIII., in abolishing monasteries, seized upon one which had been founded in the thirteenth century, in the city of London, and presented it to the city, with all its revenues, as a residence for lunatics. The prior of this monastery had been directed by its founder to receive and entertain the Bishop of St. Mary of Bethlehem and all belonging to that order whenever they should be in England. The name Old Bethlehem became attached to the monastery; it clung afterwards to the asylum; in its abbreviated form, Bethlem, or Bedlam, it is still applied to this celebrated hospital, and has passed into a household word in all English-speaking communities. It is doubtful whether the condition of the unfortunate lunatics was much improved by this new foundation; for, more than a century afterwards, we find that it was necessary to pass a rule to the effect that "no keeper or servant in Bethlehem Hospital should beat or ill treat a lunatic without he considered it absolutely necessary for the better governing of the lunatic." The statute of 1744, to which I have referred as the earliest act of Parliament in which the social treatment of insane persons is dealt with, provided that two justices of the peace could issue a warrant for the arrest of any person who was furiously mad, or so far mentally disordered as to be dangerous if left at large. The lunatic was to be locked up in a secure place, and, if necessary, chained. The way in which at this time the inmates of lunatic asylums were treated is depicted with horrible realism in Hogarth's celebrated picture. In 1763 a committee was appointed by the House of Commons to inquire into the condition of the insane, and it was proved beyond all possibility of doubt that numerous persons who were perfectly sane were enticed away from home by relatives under false pretenses and placed in asylums. It was ascertained that in one asylum the great majority of the inmates were persons of this kind; no medical man ever visited the asylum, and the inmates received no medical treatment. As the result of this investigation the first lunacy act was passed in 1773, by which a great reformation was effected, and the foundation was laid for our present enactments. By this act a board of five commissioners was appointed, who should be Fellows of the College of Physicians. No one might receive into his house more than one lunatic without a license from these commissioners, and they were to have the power of visiting all places where lunatics were detained at any time, each commissioner being bound over by oath not to reveal to the proprietor of an asylum the date of a proposed visit. This act remained in

force without further inquiry until 1813, when the attention of the House of Commons was again called to the unsatisfactory state of everything which had to do with the treatment of lunatics. It was proved beyond question that many sane persons were still incarcerated in asylums; and it was found that in one of the licensed mad-houses the patients were confined in cells on the ground-floor nine feet long, the ground wet, the only furniture consisting of a box which contained straw to be used as a bed. A select committee was appointed to investigate the whole matter, and their report contained frightful accounts of the way in which these establishments were carried on. So strong, however, was the influence which was brought to bear upon members of the legislature by those who were interested in maintaining the *status quo* that it was not till 1828 that any measure could be carried through Parliament to amend the law which had permitted such gross abuse. Up to this time any person could be committed to an asylum on the certificate of one physician, surgeon, or apothecary, under the latter term being included all who dealt in drugs, whether they had obtained a diploma or not. By the new act every certificate was to be signed by two medical men, who had separately to visit and examine the patient, and to state that he was a fit person to be confined in an asylum. Neither of these medical men was to be in any way connected with the asylum to which the patient was to be sent. The number of commissioners was raised to fifteen; their appointment was taken out of the hands of the College of Physicians and placed in those of the government. Each asylum was to be visited four times a year by a committee consisting of three commissioners. Whenever a new patient was admitted into an asylum notice had to be sent to the commissioners within seven days, and there were special regulations as to the frequent visitation of all lunatics by medical men. The commissioners were, moreover, given full power to revoke or refuse any license they might think proper, or to order the liberation of any person from an asylum.

It is a strange comment upon the state of public opinion in the early part of this century that one of the most prominent movers in the introduction of these most necessary regulations was the present Earl of Shaftesbury, then Lord Ashley. Were it not a matter of history it would be almost incredible that such a horrible system as before existed could have been allowed to remain unaltered until so recent a date that one who is still among our foremost social reformers was able to take an important part in its abolition. Under the new law the condition of the insane was much improved; but so deeply rooted was the system which it was designed to abolish that for many years complaints of ill treatment and wrongful detention made themselves heard. At length, in 1844, the commissioners themselves drew attention to the mismanagement and ill treatment of patients, which were still unhappily only too common, and which they felt themselves powerless to prevent; and as a consequence of their representations Lord Ashley again took the matter up, and passed through Parliament the celebrated act of 1845, which has been in force with the exception of slight amendments, ever since.

The system which was inaugurated under the act of 1845 may be briefly described as follows: Any registered medical practitioner is qualified by law to sign a certificate of lunacy. In the case of all patients who are not paupers,

each such certificate must be signed by not less than two registered practitioners; in the case of paupers the signature of one practitioner is sufficient. In the former class neither of the certificating doctors must have any connection, direct or indirect, with the asylum or house to which the patient is to be consigned, nor must there be any near relationship between either of them and the owner of the asylum. They must not be in partnership, nor must one of them be the paid assistant of the other. Each of them must examine the patient for himself, apart from the other; and each must note facts indicating insanity which he separately has observed for himself. Facts communicated to them by the friends of the patient as having occurred in their absence may be mentioned as additional evidence, but such communicated statements are not in themselves sufficient to render a certificate valid. In addition to these two medical certificates an order must be obtained from one of the friends of the patient, or from some one acting on their behalf, authorizing the establishment of control over the patient, and the person signing this order renders himself liable for all expenses incurred in connection with the treatment.

Having thus been duly certified, the patient either may be placed in an asylum, or he may be admitted into the private family of a medical man, or of any one else who may undertake the duty. No private family is allowed to take more than one such patient at a time without a special license. With one exception, which I will presently mention, the whole machinery for certifying and for treating lunatics is placed under the control of the Commissioners of Lunacy. There are now six acting commissioners, who are obliged to devote the whole of their time to the work, each receiving £1500 a year for his services, three of them being medical men and three barristers. In addition, there are five honorary commissioners, who are unpaid, and take no part in the detailed work of the office. The commissioners are appointed by the lord chancellor, and are responsible to him for the proper performance of their duties. It would be impossible for so small a body of men to carry on the whole of the routine work connected with the proper supervision of the sixty thousand lunatics who are under control in England and Wales, and consequently the commissioners are empowered to depute a part of their work and authority to others who are directly responsible to them. These *visitors*, as they are called, are chosen by the justices in quarter sessions from among themselves, one or more medical men in each district being appointed to help them in the more technical part of their duties. The commissioners themselves, however, perform all the duties for the metropolis and the districts immediately round it.

Every asylum must be licensed by the commissioners, or by the magistrates acting for them, and each asylum must be visited not less than six times each year, the visits being made without warning and at irregular intervals. At these inspections the books and reports kept by the superintendent are carefully inspected, and the state of the asylum inquired into; the patients also may be examined by the commissioners, whose duty it is to leave no nook or corner of the place unexplored. There is a special clause in the act authorizing the commissioners to pay night visits to asylums whenever they like. The commissioners have a similar right to pay visits whenever they like to patients who are confided to the care of private families.

A patient having been certified to be insane, he must be removed to an asylum or placed under control in a private family within seven days. Within twenty-four hours of his reception, the superintendent of the asylum or the head of the family must forward an exact copy of the certificates and order to the Commissioners of Lunacy. Provision must also be made for proper medical care. Every asylum licensed for more than one hundred patients not having a medical man as proprietor must have a resident medical officer. If the license be for more than fifty but less than a hundred patients, a medical man must visit it at least once a day; and for any number less than fifty patients there must be a medical visit at least twice a week. In the case of single patients a medical attendant must be appointed, who shall pay a visit not less often than once a fortnight. Neither of the doctors who signed the certificates is allowed to perform this duty.

The patient having been received and copies of the certificates duly forwarded, the medical man under whose care he is placed, whether in an asylum or in a family, must make a separate examination for himself, and he must within seven days forward a report to the commissioners embodying the results of this examination. From that time a journal relating to each case must be kept, which must be filled up once a week if the patient be in an asylum, and at each fortnightly visit if he be in a family. In the former instance, the state of the patient must be noted, and any special points, such as the use of a straitwaistcoat, the use of force by any of the attendants to the patient, the occurrence of fits, etc., must be entered. In the latter instance the visiting medical man must note also what state the house was in, whether everything appeared clean and well kept, etc. This journal is inspected by the commissioners at their visit. A special report must also, in the case of private patients, be sent to the commissioners at the beginning of each new year.

I mentioned that there was one exception to the statement that all lunatics are under the control of the commissioners. In the case of patients who are possessed of property their friends may place them under the immediate charge of the lord chancellor. He deputes the management of the lunatic to some one person or more, and the management of his property to certain other persons, who are in both instances directly responsible to himself. He has his own staff of medical and legal visitors, whose functions are confined to visiting the chancery lunatics only. It is naturally a much more expensive proceeding to put a lunatic in this way directly into the charge of the court of chancery, and as a rule it is only done where the estate is a large one and the lunatic a person of some consideration. There are not more than two hundred such patients in the United Kingdom.

Such, then, is the present position of the lunacy question in England. Theoretically it ought to work perfectly, and to shut out the possibility of wrongful detention and ill treatment. As a matter of fact, there are complaints from all parties, — from the public, from the general profession, and to some extent from the specialist. I must, however, reserve the consideration of these complaints and the reforms which are advocated to meet them for another letter.

(*To be concluded.*)

SHORT COMMUNICATIONS.

DIPHTHERIA AND CROUP.

MR. EDITOR, — In the JOURNAL for March 27th, page 429, Report on Progress in the Theory and Practice of Medicine, I think Dr. Mason does not give a full and fair view of the doings of the Royal Medico-Chirurgical Society of London. This organization appointed a committee in November, 1875, and their report is in *The Lancet*, October 26, 1878, with the discussion on its reception by the society. The report is rather conservative, I will admit, and positive opinions upon any one point are not given in express language. But by the very strongest words of implication two points are made: First, that it is not a filth disease; second, that diphtheria and croup are identical. This is a long stride towards a correct and an easily understood theory regarding the false membranous disease. When the profession loses sight of the well-known clinical fact that filth, however introduced into the human system, causes diseases of the alimentary canal, groping in the dark must take place. Those who are not ready to admit this I will refer to Simon's little work, reprinted in this country under the auspices of the Massachusetts State Board of Health. If any one ever heard of filth finding its way out of the system by the way of the air-passages I would like to have the facts. At the last quarterly meeting of the Rhode Island Medical Society the subject of diphtheria was discussed (March 18th) but there was not a lisp that its causation was filth. The reporter of the doings of our society for the December meeting informed the JOURNAL that I advanced "novel ideas." This is a mistake on his part, and had he taken notes of authorities to which I referred he would not have held such an opinion. It is a novelty to me to be told that filth induces a disease of the air-passages and not of the digestive organs.

JAMES O. WHITNEY.

PAWTUCKET, R. I.

[*The Lancet*, October 26, 1878, gives the following conclusions from the report mentioned: (1.) Membranous inflammation confined to, or chiefly affecting, the larynx and trachea may arise from a variety of causes, as follows: (*a.*) From the diphtheritic contagion. (*b.*) By means of foul water, or foul air, or other agents, such as are commonly concerned in the generation or transmission of zymotic disease (though whether as mere carriers of contagion cannot be determined). (*c.*) As an accompaniment of measles, scarlatina, or typhoid, being associated with these diseases, independently of any ascertainable exposure to the especial diphtheritic infection. (*d.*) It is stated, on apparently conclusive evidence, although the committee have not had an opportunity in any instance of examining the membrane in question, that membranous inflammation of the larynx and trachea may be produced by various accidental causes of irritation, — the inhalation of hot water or steam, the contact of acids, the presence of a foreign body in the larynx, and a cut throat. (2.) There is evidence in cases which have fallen under the observation of members of the committee, and are mentioned in the tables appended, that membranous affection of the larynx and trachea has shortly followed exposure to cold, but their knowledge of the individual cases is not sufficient to exclude the possible intervention or coexistence of other causes. The majority of cases of croupal symptoms definitely traceable to cold appear to be of the nature of laryngeal catarrh. (3.) Membranous inflammation, chiefly of the larynx and trachea, to which the term "membranous croup" would commonly be applied, may be imparted by an influence, epidemic or of other sort, which in other persons has produced pharyngeal diphtheria. (4.) And, conversely, a person suffering with the membranous affection, chiefly of the air-passages, such as would commonly be termed membranous croup, may communicate to another a membranous condition limited to the pharynx and tonsils, which will be commonly regarded as diphtheritic. It is thus seen that the membranous affection of the larynx may arise in connection with common inflammation, or with specific disorders of several kinds, the most common of which in this relation is that which produces similar change elsewhere, and is recognized as diphtheria. In the larger number of cases of membranous affection of the larynx the cause is obscure (that is, in any given case it is difficult to predicate the particular cause in that case). Among those in which it is apparent common irritation seldom presents itself as the source of the disease; accidental injury is but very infrequently productive of it. But few cases of undoubted origin from exposure to cold are on record. On the other hand,

in a very large number of cases infective or zymotic influence is to be traced. The membrane, even when chiefly laryngeal, is more often than not associated with some extent of a similar change in the pharynx or in the tonsils; and whether we have regard to the construction of the membrane, or to the constitutional state as evinced by the presence of albumen in the urine, it is not practicable to show an absolute line of demarkation (save what depends upon the position of the membrane) between the pharyngeal and laryngeal forms of the disease. The facts before the committee only warrant them in the view that when it obviously occurs from a zymotic cause of distinct infection, and primarily affects the pharynx, constitutional depression is more marked, and albuminuria is more often and more largely present, though in both conditions some albumen in the urine is more frequently present than absent. The most marked division indicated by the facts before the committee is that between membranous and non-membranous laryngitis. The committee suggest that the term "croup" be henceforth used wholly as a clinical definition, implying laryngeal obstruction occurring with febrile symptoms in children. Their croup may be membranous or not membranous, due to diphtheria or not so. The term "diphtheria" is the anatomical definition of a zymotic disease, which may or may not be attended with croup. The committee propose that the term "membranous laryngitis" should be employed, for the avoidance of confusion, whenever the knowledge of the case is such as to allow of its application.

(Signed): W. Howship Dickinson, Chairman, C. Hilton Fagge, Samuel Gee, G. F. Payne, H. G. Howse, R. H. Semple, W. S. Greenfield, Secretary. — EDITOR.]

DR. SAMUEL HOWE.

It is with feelings of great sorrow that it becomes our duty to record the death of Dr. Samuel Howe, which occurred on the last day of April. Dr. Howe, though young in years and in the practice of his profession, had demonstrated that his long term of study had borne good fruit. He was not only well versed in the science of medicine in general, but he was peculiarly fitted for the specialty which he had chosen, and outside of the strict limits of his professional study there were few, if any, among his brother practitioners whose knowledge of topics embraced in general literary culture covered so wide a range. Equally at home in modern history, his knowledge included these subjects in both their general and constitutional aspects; while his familiarity with the subjects of natural history and comparative anatomy was a matter of surprise to those who knew how closely he had applied himself to the study of his profession. His knowledge was equaled by his modesty in asserting it. A genial companion and generous almost to a fault, his loss will be severely felt by those with whom he most constantly associated. His dislike of self-assertion and his scrupulous honesty in the practice of his profession was perhaps an obstacle to his full success at the outset of his career. But none who had employed his services had ever reason to complain of lack of skill, or of that careful attention which he felt was ever due to one who had entrusted himself to his care, whatever the circumstances in life of that patient might be. While regretting his untimely death, it is to be hoped that his habits of careful study and conscientious practice may prove an example to those who are left to mourn his loss.

PROLAPSE OF RECTUM.

MR. EDITOR, — I notice, in JOURNAL for April 10th, apparatus for prolapse of rectum, etc. I have recommended for twenty-five years the mother to place the finger in front of rectum (anus) press up, and pull forward the flesh during defæcation. This prevents descent of the bowel.

JAMES O. WHITNEY.

PAWTUCKET, R. I.

REPORTED MORTALITY FOR THE WEEK ENDING APRIL 26, 1879.

Cities.	Population estimated for July, 1879.	Reported Deaths in each.	Annual Death-Rate per 1000 during the Week.	Percentage of total Deaths from				
				The Principal "Zymotic" Diseases.	Pneumonia.	Diphtheria and Croup.	Scarlet Fever.	Diarrhœal Diseases.
New York	1,085,000	579	27.82	19.68	12.27	2.42	7.95	2.07
Philadelphia	—	—	—	—	—	—	—	—
Brooklyn	564,400	234	21.62	18.37	14.10	7.27	5.13	0.86
Chicago	—	142	—	19.72	13.38	9.15	1.41	1.41
St. Louis	—	96	—	6.24	7.28	4.16	1.04	—
Baltimore	365,000	142	20.29	10.56	8.45	3.52	2.82	2.11
Boston	360,000	150	21.72	14.67	10.00	8.00	2.00	0.50
Cincinnati	—	121	—	24.54	6.61	2.45	14.70	1.63
District of Columbia	160,000	68	22.15	4.41	13.23	1.47	1.47	1.47
Cleveland	—	60	—	18.33	8.03	3.33	6.67	—
Pittsburgh	—	48	—	20.83	12.50	8.33	—	2.08
Milwaukee	—	52	—	17.27	11.54	17.27	—	—
Providence	101,000	38	—	15.55	13.15	2.43	4.86	2.43
New Haven	60,000	26	22.59	11.54	3.85	7.69	3.85	—
Charleston	57,000	—	—	—	—	—	—	—
Nashville	27,000	16	30.89	6.25	12.50	6.25	—	—
Lowell	53,300	25	24.45	4.00	20.00	—	—	—
Worcester	52,500	18	17.87	16.67	11.11	—	—	5.55
Cambridge	51,400	18	18.25	22.22	11.11	22.22	—	—
Fall River	48,500	34	36.55	5.88	8.82	2.94	—	—
Lawrence	38,200	19	25.94	26.32	10.53	5.26	—	—
Lynn	34,000	17	26.08	17.67	11.76	11.76	—	—
Springfield	31,500	8	13.24	12.50	12.50	12.50	—	—
New Bedford	27,000	10	19.31	—	10.00	—	—	—
Salem	26,400	6	11.35	33.33	—	16.67	—	—
Somerville	23,350	5	11.17	20.00	—	—	20.20	—
Chelsea	20,800	6	15.04	50.00	—	50.00	—	—
Taunton	20,200	4	10.32	—	—	—	—	—
Holyoke	18,200	13	37.25	23.08	7.70	15.38	7.70	—
Gloucester	17,100	3	9.15	—	—	—	—	—
Newton	17,100	—	—	—	—	—	—	—
Haverhill	15,300	—	—	—	—	—	—	—
Newburyport	13,500	7	27.03	14.29	—	14.29	—	—
Fitchburg	12,500	4	16.68	—	—	—	—	—

One thousand nine hundred and fifty-four deaths were reported: 333 from consumption, 328 from the principal "zymotic" diseases, 218 from pneumonia, 104 from diphtheria and croup, 96 from scarlet fever, 65 from bronchitis, 26 from diarrhœal diseases, 25 from whooping-cough, 18 from typhoid fever, 16 from erysipelas, 13 from cerebro-spinal meningitis, 13 from malarial fever, 11 from measles, two each from remittent, intermittent, and congestive fevers, none from small-pox; indicating an increase in cerebro-spinal meningitis, measles, diphtheria and croup, consumption, and total mortality, a slight decrease in scarlet fever and diarrhœal diseases, the others remaining about the same. From *bronchitis* 30 deaths were reported in New York, seven in Brooklyn, six in St. Louis, four in Boston, three in Chicago, District of Columbia, and Milwaukee, two in Pittsburgh and Fall River, one in Cincinnati, New Haven, Nashville, Worcester, and Lynn. From *whooping-cough*, 14 in New York, five in Brooklyn, three in Cincinnati, two in Boston, one in Cleveland. From *typhoid fever*, four in New York, three in Chicago, two in Brooklyn and Lawrence, one in St. Louis, Baltimore, Boston, Cleveland, Pittsburgh, Lowell, and Salem. From *erysipelas*, five in New York, two in Brooklyn, Chicago, Cincinnati, and Lawrence, one in Fall River. From *cerebro-spinal meningitis*, four in New York, three in Chicago, two in Cincinnati and Worcester, one in Boston and Lynn. From *malarial fever*, 13 in New York. From *measles*, four in Pittsburgh, three in Cleveland, two in New York and Baltimore. From *remittent fever*, one in Brooklyn and Chicago. From *intermittent fever*, two in Brooklyn. From *congestive fever*, two in Chicago. Brooklyn reported two deaths from hydrophobia. In seventeen of the nineteen cities of Massachusetts, with an estimated population of 848,450, the mortality was increased from diphtheria and croup, cerebro-spinal meningitis, and consumption; about the same from typhoid fever, and diminished from the other prevalent diseases.

The weather remained unsettled at the West, and fine in the Northeastern States, the meteorological record for Boston being as follows: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7 A. M.	2 P. M.	9 P. M.	Daily Mean.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	Duration.	Amount in Inches.
April 20	29.895	46	55	29	61	32	40	44	NW	NW	W	6	13	8	C	C	C	—	—
" 21	30.150	51	59	36	58	18	28	35	W	NW	NW	8	13	8	C	C	C	—	—
" 22	30.281	53	63	38	50	17	28	32	W	W	NW	12	13	5	F	C	C	—	—
" 23	30.091	53	62	44	42	33	37	37	W	NW	W	12	32	13	O	F	C	—	—
" 24	30.277	49	60	36	41	15	24	27	NW	N	N	12	17	10	C	C	C	—	—
" 25	30.153	44	51	41	59	60	37	52	E	E	S	5	13	9	O	O	O	—	—
" 26	30.140	41	43	39	91	78	82	84	NE	E	E	12	9	1	O	O	O	—	.02
Week.	30.141	48	63	29				44		NW		1927 miles.						1.9	.02

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; R., rain; T., threatening.

By returns to April 12th, pulmonary diseases were becoming less prevalent, although still excessively fatal in Great Britain; whooping-cough continued severe; scarlet fever, diarrhœa, and small-pox (in Dublin and London) showing a decreased fatality, diphtheria and fevers remaining about the same. The death-rates for the week ranged from 15.0 in Portsmouth to 32.5 in Norwich.

BOOKS AND PAMPHLETS RECEIVED. — First Annual Report of the State Board of Health of the State of Rhode Island for the Year ending December 31, 1878. Providence. 1879.

The Treatment of Dropsy of the Gall-Bladder by Operation (Cholecystotomy), with Notes of a Successful Case. By George Brown, M. R. C. S., L. S. A. (Reprint from the British Medical Journal.) London: Baillière, Tindall and Cox. 1879.

Clinical Charts in Small Volume and Convenient Size for Use in Private Practice. Published by G. T. Swarts, 57 Hancock Street, Boston. (A. Williams & Co.)

Practical Instruction in Animal Magnetism. By J. P. F. Deleuze. Translated by Thomas C. Hartshorn. Revised Edition. New York: Samuel R. Wells & Co. 1879. (For sale by Lee and Shepard.)

Transactions of the Vermont Medical Society for 1878. St. Albans. 1879.

Oyster-Shucker's Corneitis (Corneitis Ostrearii). By W. J. McDowell, M. D., Baltimore. (Reprint.)

An Address on Obstetrics and Diseases of Women and Children, delivered before the American Medical Association June 5, 1878. By Edward W. Jenks, M. D., Detroit. (Extract from the Transactions.) Philadelphia. 1878.

A Treatise on Therapeutics, comprising Materia Medica and Toxicology, with Especial Reference to the Application of the Physiological Action of Drugs to Clinical Medicine. By H. C. Wood, Jr., M. D. Third Edition, revised and enlarged. Philadelphia: J. B. Lippincott & Co. 1879. (A. Williams & Co.)

Economic Monographs. No. XIV. Proposed Legislation on the Adulteration of Food and Medicine. By Edward R. Squibb. (Transactions of the Medical Society of the State of New York, 1879.) New York: G. P. Putnam's Sons. 1879. (A. Williams & Co.)

Results after Excision of the Hip-Joint. By E. H. Bradford, M. D. 1879.

Spermatorrhœa: Its Causes, Symptoms, Results, and Treatment. By Roberts Bartholow, A. M., M. D. Fourth Edition, revised. New York: William Wood & Co. 1879. (A. Williams & Co.)

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